11 December 2014

Mr John Pierce
Chairman
Australian Energy Market Commission
PO Box A2449
Sydney South NSW 1235

Submitted online: www.aemc.gov.au

Dear Mr Pierce

**EPR0039 – Optional Firm Access, Design and Testing Supplementary Report: Pricing**

Origin Energy (Origin) appreciates the opportunity to provide comments to the Australian Energy Market Commission (AEMC or Commission) optional firm access, design and testing supplementary report on pricing.

As we have expressed in our previous submissions, Origin does not consider that there is a case for the implementation of the optional firm access (OFA) model. The added complexity and inadequacies of the proposed access LRIC pricing framework has only served to reinforce this view.

The LRIC prototype pricing model is unlikely to maximise the present value of economic benefits for those that produce, consume and transport electricity. By locking in the net present cost of future transmission investments well in advance and without an assessment of credible alternatives, the LRIC is likely to result in less efficient pricing outcomes, particularly when compared to the status quo.

Under the current Regulatory Investment Test (RIT-T) the net present value and efficient pricing of an investment is more likely to be maximised given the assessment of a range of technically and commercially feasible options, closer to the required asset replacement or network limitation being identified. Additionally the assumption that all generation is balanced at the regional reference node is again likely to distort the accuracy of pricing outcomes under the LRIC approach.

Origin agrees with the AEMC on the need for resilient and flexible market and regulatory arrangements, capable of responding to changing market conditions.[1] It is not clear that these objectives could be achieved through changing the inputs in the prototype pricing model. The LRIC price is intended to reflect actual costs by measuring existing spare capacity, the lumpiness of transmission investment, network topology, forecast load growth and firm generation. Accurately identifying these variables is inherently difficult and could be expected to be subject to an increasing margin of error the further into the future they have been forecast. Accordingly, we do not consider the model could be materially improved by changing inputs or assumptions.

We elaborate on the above issues further below.

[1] AEMC 2014, Optional Firm Access, Design and Testing, Supplementary Report: Pricing, 31 October 2014, Sydney. p. 1.



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### *1. The LRIC pricing model produces inefficient prices*

Network planning necessarily relies on assumptions and forecasts to determine the net economic benefit or cost of investing in the transmission network. The larger the number of assumptions or the longer the lead time in developing forecasts from the network investment increases the risk that the present value of economic benefits or the efficient cost of an investment is not maximised. The current planning arrangements under the RIT-T enable assessments of an investment to be revised before the optimal timing and preferred option of an investment is finally determined.

The LRIC prototype pricing model, in contrast, imposes costs on generators for a predetermined investment in the future that may not be justifiable if reassessed closer to the time of investment, creating the potential for the inefficient pricing of any firm access. The prototype pricing model essentially locks in the cost of the size, timing and location of an augmentation based on a range of medium to long term forecasts and assumptions. The inherent weakness in this approach is the size, timing and location of an augmentation is forecast years in advance: capitalising a future, already planned and predetermined augmentation being brought forward with discount rate being applied creating an incremental increase in the cost in net present value terms.[2]

Specifically under the LRIC, prices are derived from the net present value from an assumed modelled baseline and adjusted network development scenario. A limitation identified by the AEMC with this approach is asset replacement or augmentation is limited to duplication of existing assets. This ignores other potential solutions, including utilisation of different transmission paths, changes to voltage levels, network control equipment, network support arrangements and load management[3] that could facilitate firm access more efficiently and at a lower cost.

The LRIC approach to network planning could constrain the ability of the market to respond to changing market conditions, compared to current arrangements under the RIT-T. A more flexible approach to network planning that allows network investments to be assessed and reassessed, following a need being identified, until a present net economic benefit or reliability standard can be identified is likely to reduce the number and uncertainty in forecasts leading to a technically and commercially feasible, preferred option being identified facilitating an investment at an efficient cost.

### *2. The LRIC pricing model does not reflect the location of generation and demand*

The prototype pricing model assumes all generation is balanced at the regional reference node (RRN). This ignores major transmission connected load, or instances where the local load is greater than generation, producing prices that are unrepresentative of providing the cost of access.

The AEMC noted that generators locating remotely from the RRN and from other major demand centres would pay a higher price for access. While we agree, losses and generator network requirements can be influenced by the proximity to demand centres and the RRN, in practice the pricing model ignores transmission connected loads with all

[2] AEMC 2012, Transmission Frameworks Review, Second Interim Report, 15 August 2012, Sydney. p. 32.
[3] AEMC 2014. p. 14.

generation being balanced at the RRN.[4] This produces cost anomalies that are not reflective of the costs that are likely to be incurred by generators reflective of the location of generation and demand as indicated by generator marginal loss factors.

Assuming all regional generation is balanced at the RRN ignores the complexity of the location of generation and demand and where end-users of generation are relative to the RRN. This assumption, that access at the regional node is required, has previously been identified as a flaw for the allocation of transitional access under the OFA model for generation located in southern NSW and for Tasmania where demand around Hobart, in the south, is located remotely from the regional reference node at Georgetown in the north.

While we acknowledge the AEMC's view that the prices produced by the model should not be taken as the prices for firm access, the extent to which they are not reflective of the location of generation and demand can be demonstrated through the location of generation in Origin's portfolio. Access pricing for Mt Stuart, for example, located in Townsville had a modelled access price of over $1,100/kW, compared to other generators with less favourable loss factors. This is despite the fact that Mt Stuart has a positive marginal loss factor: meaning generation from the station is used to service end-users in far north Queensland, where local demand is greater than generation, and not relevant to demand at the RRN located at South Pine in Brisbane.

The location of generation and demand is complex, making the modelling of generation flow paths inherently prone to error. The size, timing and location of the commissioning or decommissioning of generators or transmission connected load would have a significant impact on generation flows paths, unrelated to the location of the regional reference node. All this adds to the inherent complexity of determining an accurate price for access under the LRIC model.

Should you have any questions or wish to discuss this information further, please contact Ashley Kemp on (02) 9503 5061 or ashley.kemp@originenergy.com.au.

Yours sincerely,

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[4] EMCa 2014, Review of Prototype Firm Access Pricing Model, October 2014, Sydney 2014. p. 8.